

# What`s new in arrhythmias? Highlights vom ESC 2006 in Barcelona



# ACC/AHA/ESC Guidelines 2006 for the Management of Patients With Atrial Fibrillation



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ACC/AHA/ESC Guidelines

## ACC/AHA/ESC 2006 guidelines for the management of patients with atrial fibrillation—executive summary

A report of the American College of Cardiology/American Heart Association Task Force on practice guidelines and the European Society of Cardiology Committee for Practice Guidelines (Writing Committee to Revise the 2001 Guidelines for the Management of Patients with Atrial Fibrillation)

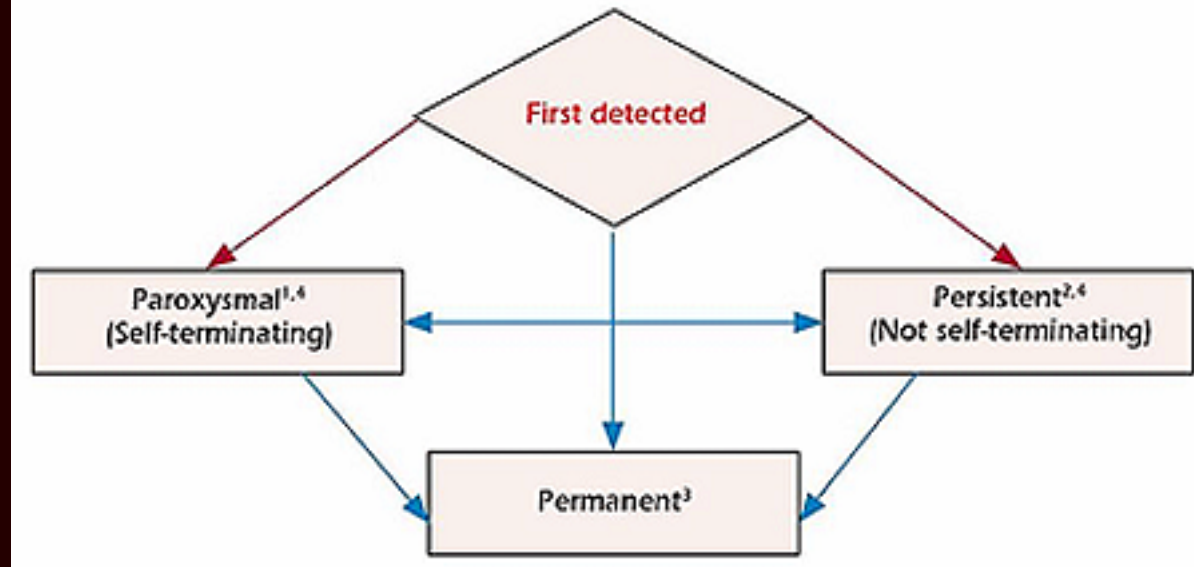
*Developed in collaboration with the European Heart Rhythm Association and the Heart Rhythm Society*

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# ACC/AHA/ESC Guidelines 2006 for the Management of Patients With Atrial Fibrillation



I. Frequenzregularisierung



II. Verhinderung thrombembolischer Komplikationen (Prognose!)



III. Wiederherstellung und Erhalt von Sinusrhythmus



# Antikoagulation zur Thrombembolieprophylaxe bei Vorhofflimmern ACC/AHA/ESC Guidelines 2006



**TABLE 13. Antithrombotic Therapy for Patients With Atrial Fibrillation**

Risk Category	Recommended Therapy	
No risk factors	Aspirin, 81 to 325 mg daily	
One moderate-risk factor	Aspirin, 81 to 325 mg daily, or warfarin (INR 2.0 to 3.0, target 2.5)	
Any high-risk factor or more than 1 moderate-risk factor	Warfarin (INR 2.0 to 3.0, target 2.5)*	
Less Validated or Weaker Risk Factors	Moderate-Risk Factors	High-Risk Factors
Female gender	Age greater than or equal to 75 y	Previous stroke, TIA or embolism
Age 65 to 74 y	Hypertension	Mitral stenosis
Coronary artery disease	Heart failure	Prosthetic heart valve*
Thyrototoxicosis	LV ejection fraction 35% or less	
	Diabetes mellitus	

\*If mechanical valve, target international normalized ratio (INR) greater than 2.5.

INR indicates international normalized ratio; LV, left ventricular; and TIA, transient ischemic attack.

weitere Risiko-Scores: **CHADS<sub>2</sub>**, Framingham, SPAF



## Antithrombotische Therapie von VHF-Patienten (n=10.300) Guidelines vs. „general practice“

- 25 % Marcumar in der „low risk“ Gruppe (überbehandelt)  
meistens jüngere herzgesunde Pt., kurze afib Anamnese, hochsymptomatisch
- 70 % Marcumar in der „high risk“ Gruppe (unterbehandelt)  
Ältere komorbide Pt. mit Herzinsuffizienz, schlechte Frequenzkontrolle
- Perm.>pers.>paroxysmales VHF
- Unberücksichtigte RF: Apoplex/TIA, Alter, RR ↑, CHF, DM
- Hochrisikopatienten ohne Marcumar: Apoplex und Tod ↑

Guideline adherent antithrombotic treatment is associated with improved outcome compared to undertreatment in real life atrial fibrillation patients (Euro Heart Survey)

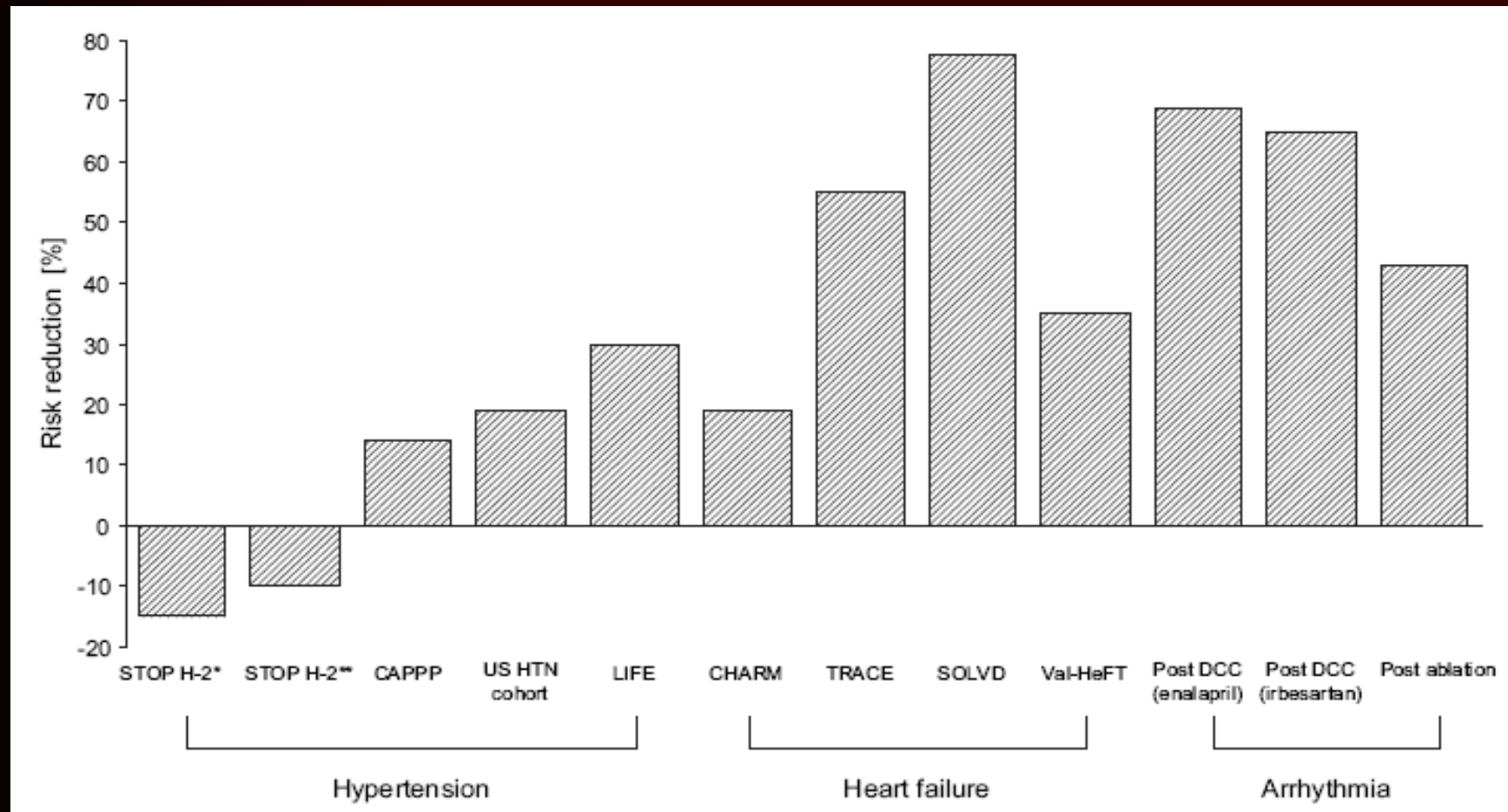


	Undertreatment	Guideline followed	Overtreatment	p
N = 3620 patients	991 (27%)	2380 (66%)	249 (7%)	
Age, years (SD)	68 (12)	66 (12)	57 (11)	<0.05
Idiopathic AF	4.8%	9.9%	53.9%	<0.05
<b>Death</b>	<b>5.4%</b>	<b>3.7%</b>	<b>1.2%</b>	<b>&lt;0.05</b>
<b>Thromboembolism</b>	<b>4.6%</b>	<b>2.3%</b>	<b>0.8%</b>	<b>&lt;0.05</b>
<b>Major bleeding</b>	<b>1.2%</b>	<b>1.3%</b>	<b>0.8%</b>	<b>ns</b>
Combined endpoint*	10.0%	6.6%	2.1%	<0.05

# Upstream therapies – VHF Prävention mit ACE Hemmern und ARBs



Antiinflammatorisch, antiproliferatosich, antiapoptotische Wirkung auch von Statinen, PUFAs (polyungesättigte Fettsäuren....)



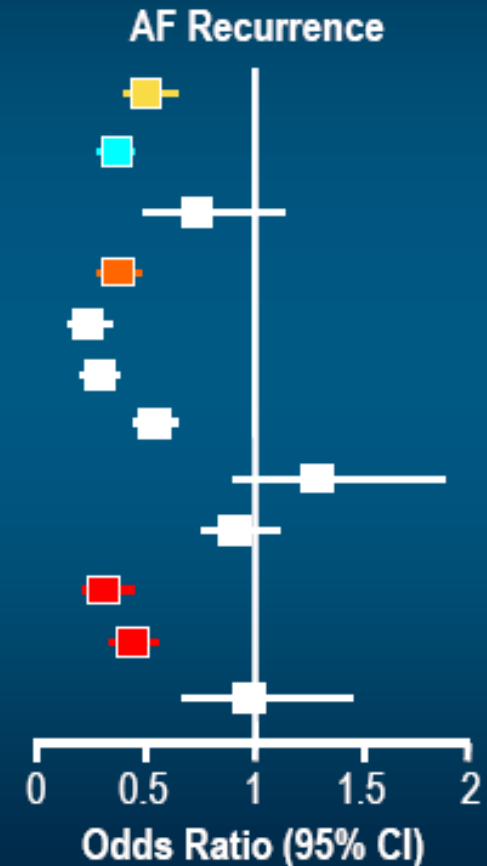
# AADs for Prevention of AF After DCC Metaanalyse 2006



## RCT Included Into Analysis

Total	44
No. of patients	11,322
Placebo controlled	25
Active comparator	14
Persistent AF	38 (60% pts)
PAF/recent onset	6
EF >50%	41
Lone AF	1
Follow-up	1 year

Class IA  
Class IC  
Metoprolol  
Class III  
Amio  
Dofetilide  
Sotalol  
Q vs Class I  
Q vs Sotalol  
Amio vs Class I  
Amio vs Sotalol  
Sotalol vs Class I

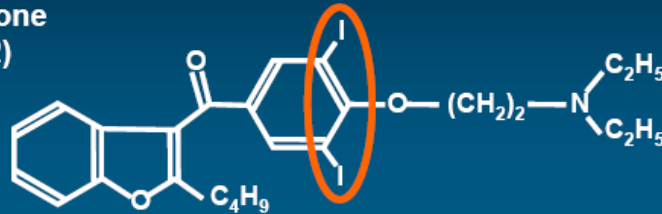


Lafuente-Lafuente et al. *Arch Intern Med.* 2006;166:719-728.

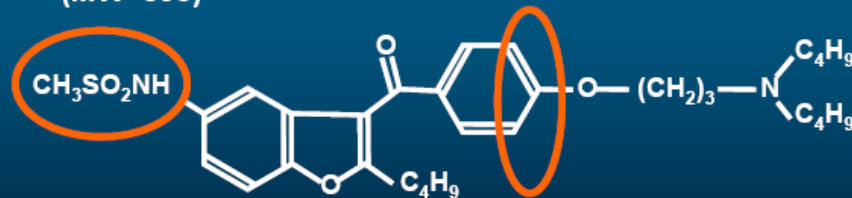
# Neue Klasse III Antiarrhythmika



Amiodarone  
(MW=682)



Dronedarone  
(MW=593)

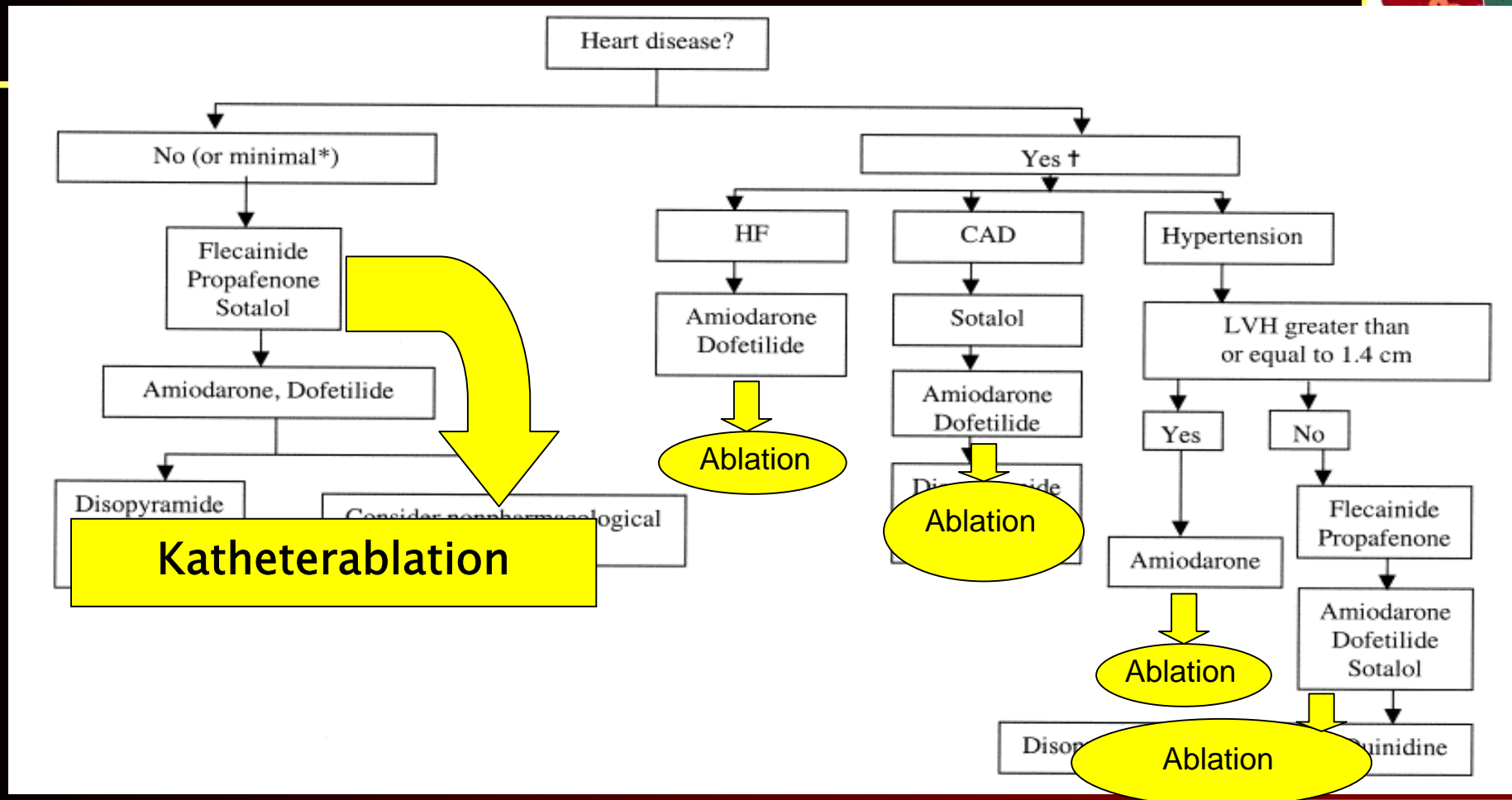


## *Amiodarone-ähnliche Substanz ohne Iod*

- gleiche electrophysiologischen Eigenschaften wie Amiodaron
- Halbwertszeit 24 Stunden
- weniger Wechselwirkungen mit anderen Substanzen

- 3 randomisierte placebokontrollierte Studien (insges. ~ 1000 P.)
- Nachweis einer moderaten Effektivität zur Stabilisierung SR bei VHF Patienten nach Kardioversion
- keine Schilddrüsen- oder Lungenprobleme
- Keine Proarrhythmie
- Studien an rel. gesunden Probanden ohne CHF
- GI side effects bis 10%

# ACC/AHA/ESC Guidelines 2006 Therapiestrategie: Erhalt von Sinusrhythmus



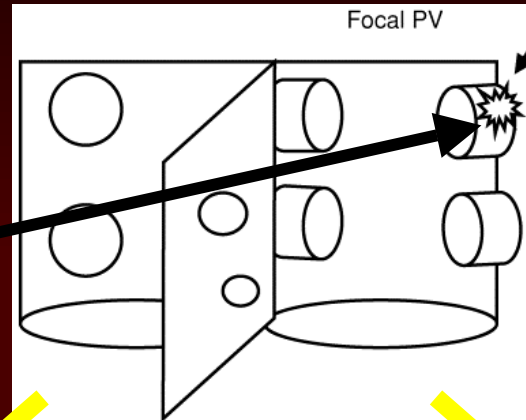
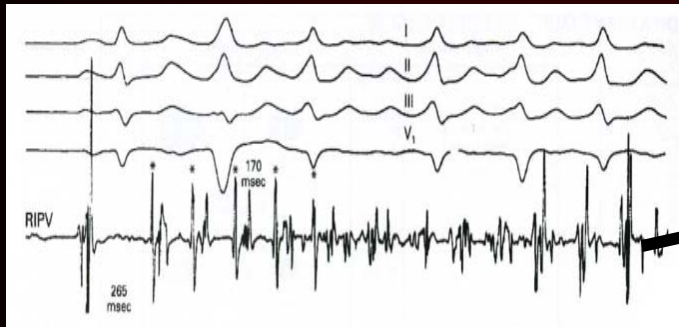
## Maintenance of Sinus Rhythm (8.3, S. 207) RECOMMENDATIONS

**Klasse IIa** Catheter ablation is a reasonable alternative to pharmacological therapy to prevent recurrent AF in symptomatic patients with little or no LA enlargement. (Level of Evidence: C)

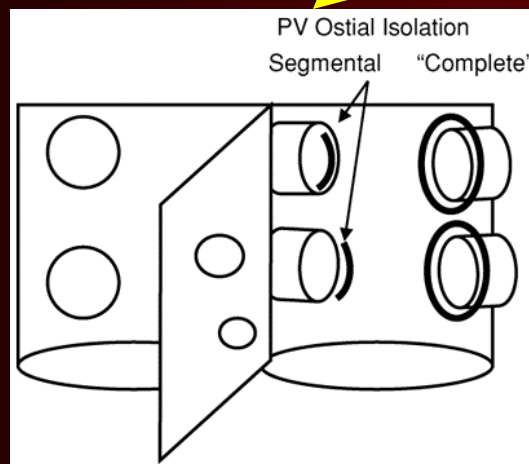
# Segmental ostiale versus zirkumferentielle Pulmonalvenenisolation



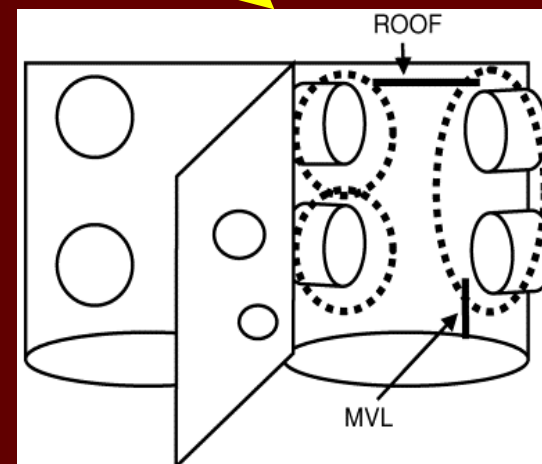
## Haissaguerre NEJM 1998



Erfolg  
50–70 %  
parox. VHF  
40–50 %  
pers. VHF  
40% Re-Do



Bordeaux 2000



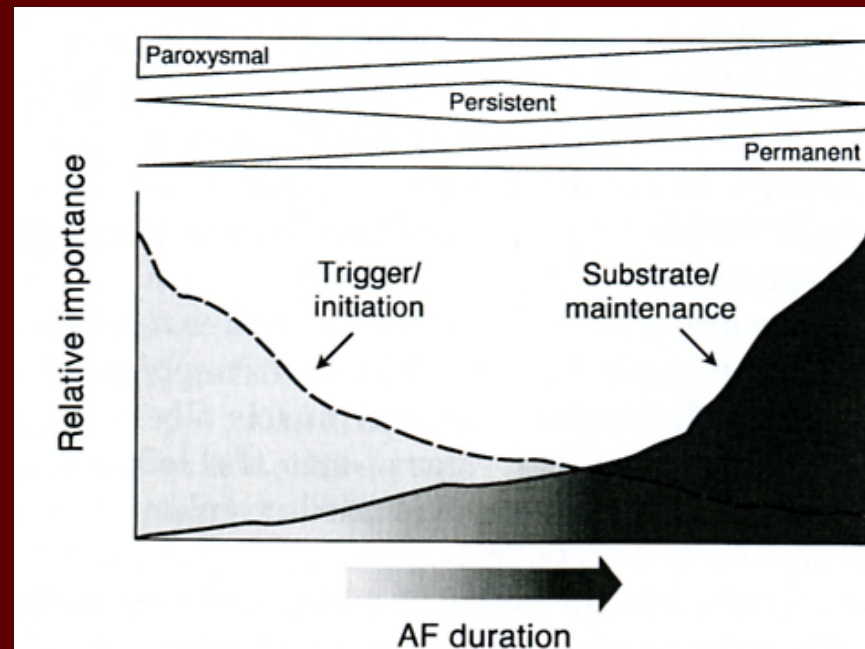
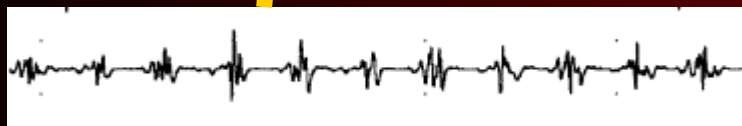
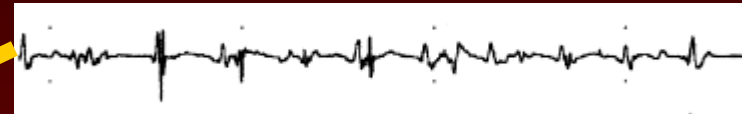
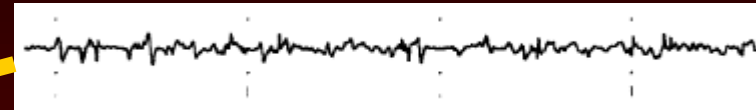
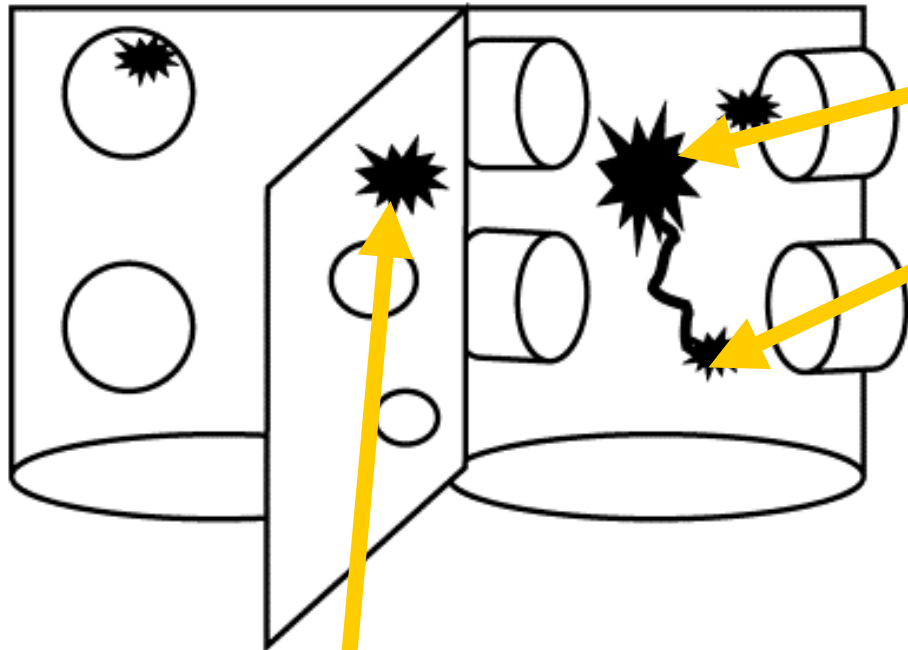
Pappone 2001

Erfolg  
86 %  
parox. VHF  
68 %  
pers. VHF

# Complex fractionated electrograms (CFAEs) Perpetuators of afib?



Substrate Ablation (example targets)

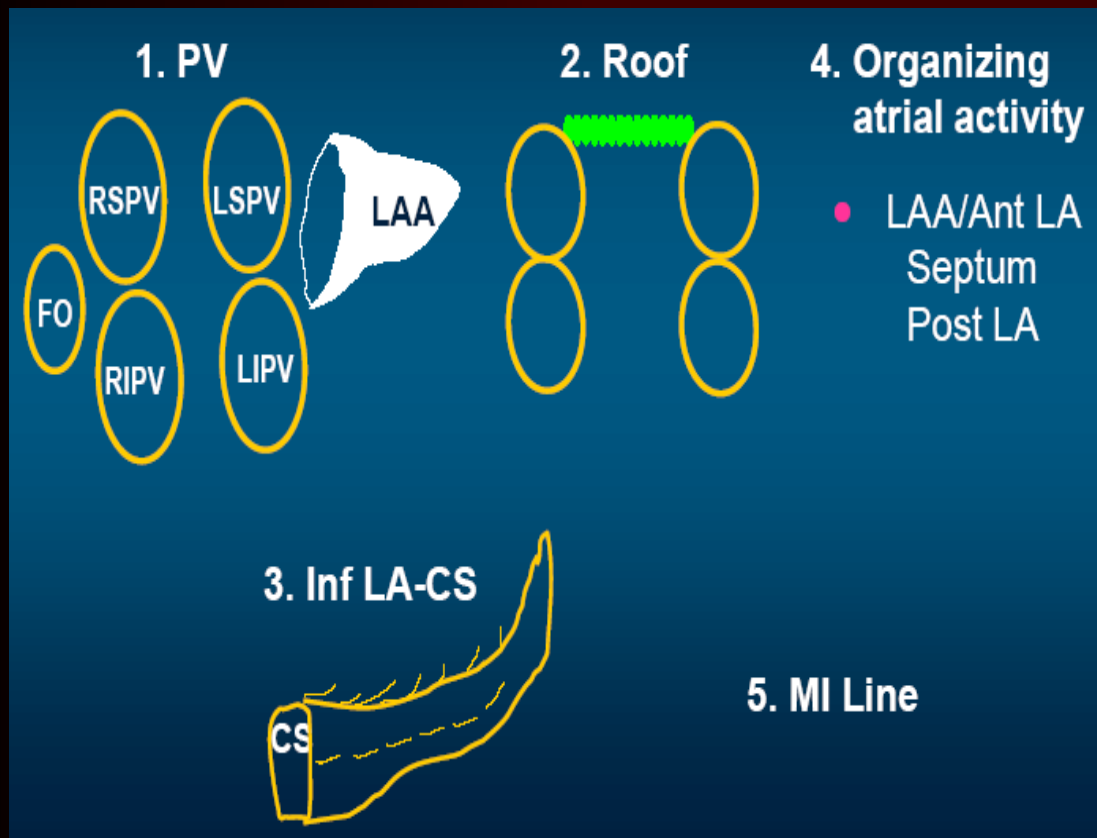


# „Maßgeschneiderte“ VHF-Ablation mit elektrogramm-gesteuerter Elimination der Trigger und Driver



## Stufenplan – Bordeaux 2006

### EP° Konversion in SR und fehlende Induzierbarkeit



*Haissaguerre JCE 2006*  
122 Pt pers. und  
permanentem VHF  
9 Monate F/U  
⇒ 90% SR ohne AA!!!  
⇒ 40% Re-Do für ATs

# ESC 2006 Arrhythmien Zusammenfassung I



- Therapiestrategien von VHF
  1. Frequenzregularisierung,
  2. Thrombembolieprophylaxe (OAK INR 2–3)
  3. Rhythmuskontrolle (bei Sx und HF)
- VHF Prävention durch upstream Therapien mit ACE-Hemmern, Statinen...

# ESC 2006 Arrhythmien Zusammenfassung II



- Die Katheterablation von Vorhofflimmern ist jetzt eine Klasse IIa C Indikation für Patienten mit medikamentös therapierefraktärem symptomatischen VHF, auch bei struktureller Grunderkrankung
- „maßgeschneiderte“ VHF–Ablation mit elektrogramm–gesteuerter Elimination der Trigger und Driver als Alternative zum standardisierten Läsionsset.